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Volume 32 | Issue 2 Article 9

1970

Environmental Veterinary Medicine: General Aspects

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The primary concern of the veterinary profession is the service it can render to mankind. The significance of veterinary medical services is measured by the availability of food which is supplied efficiently, the emotional and psychological improvement in others through the enjoyment of companion animals, and improvement of the public health by control of diseases of man which may result from contact with animals.

Many people are familiar with the role of veterinarians in agricultural practice, small animal practice, sanitation, meat and dairy inspection, and disease research. These functions are still vital to our health and economy. However, because of expanding and shifting population, new methods of food animal production, and the increased demand by urban dwellers for companion animals, the veterinarian has an added opportunity and responsibility. That role is in the protection and preservation of the environment in which both animals and man must coexist, hopefully in a mutually beneficial relationship.

The animal and bird population of the United States is an important factor in considering our total environment. Animals kept for food and fiber contribute significantly to the general increase in wastes and odors with which all citizens must contend. For example, a feedlot of 1,000 steers weighing 800 pounds each may eliminate 5 tons of air dry equivalent fecal wastes per day. The design of many such feedlots is conducive to delivery of a large portion of such wastes into nearby waterways or streams. If the stream flow is small or near a point where drinking or recreational use of the waterway is being made, pollution may be a serious problem. The odor and noise attendant to large concentrations of animals must be considered as well. Thus, with less agricultural land supporting more animals each year and with population pressure making feedlot geographic isolation more difficult, a very real need is the ability of animal production units to exist in harmony with man and his environment.

The general effects of animal waste pollution are obvious and well known. Increased organic matter in streams utilizes available oxygen resulting in fish kills and foul or septic streams if pollution is severe. The increased levels of nitrates and phosphates in water contribute to undesirable eutrophication and algal blooms. Streams may also serve as efficient mechanisms for carrying some zoonotic diseases such as leptospirosis. Increased nitrate levels may find their way into drinking water supplies of man or livestock, sometimes with detrimental effects.

Pollution of air, earth, and water is increased as a result of those industries supplying agriculture. The manufacture of farm equipment, fertilizers, minerals, pesticides, feeds, and fuels encompasses a vast array of industrial activities, many of which are massive contaminators of air and water. Thus, the production of phosphate minerals and superphosphate fertilizer, if not well controlled, can result in contamination of air and forage with fluorides, which may be dangerous to livestock grazing the area. Leaded gasoline, used in nearly all internal combustion engines, may heavily contaminate the air and forage along busily traveled highways. Lead poisoning in animals has resulted from such forage contamination or from accidental consumption of lead-containing grease or used motor oil. Accidental pois-

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oning of animals by pesticides, as well as careless or improper use of insecticides or herbicides, has resulted in quite high levels of these materials in animal feeds and resultant contamination of meat, milk, and eggs.

Varied and changing methods of harvest and storage may contribute to losses in energy value of animal foods, decrease in vitamin content, or toxicity due to mold growth. Aflatoxins (mold metabolites) growing in corn may be passed in small quantities in milk. The same is true of insecticides. Each class of these materials has members known to be carcinogenic to laboratory animals. These are but a few examples of the many ways livestock production and related industries may contaminate and degrade the environment of both animals and man.

It is obvious that, with certain limitations, animals and mankind inhabit the same environment. They breathe the same air, drink water from similar sources, and walk the same earth. As such, it is inevitable that both will be subjected to many of the same abuses. Man's physiological similarity to the higher animals means that at least some of his responses to the environment will be similar to those of the animals near him. Because animals generally have shorter life spans, long-term contamination and its effect on lifetime exposure and subsequent generations may be studied more rapidly. Thus, in livestock, wildlife, and pets, mankind has a valuable indicator of the havoc which he may be inviting upon himself. It behooves us, then, to watch carefully every effect upon other species which is attributable to environmental abuse. Numerous animal species are also necessary for research into the effects of environmental change upon life. As such, higher animals of many kinds are presently our best means of making approximations of the potential hazard to man.

In this total picture, every veterinarian should strive to appreciate the ecology and relationship of his patients to the environmental hazards which they may generate or receive. The agricultural veterinarian should not ignore the stream pollution resulting from feedlot runoff; nor should the small animal physician in a metropolitan area practice without knowing, for example, something of the possible relationship of atmospheric sulfur dioxide to canine respiratory disease. The educator and researcher must direct their efforts toward increasing and disseminating knowledge of the vital issues of our survival and quality of life. We cannot afford the luxury of pursuing our own narrow interests without relevance to the greatest segment of the population.

Ear Trimming—

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4. Boxer

Trim the ear so that ¾ of the length is remaining. Boxers are cut with a slight bell contour, with the bell ¼–⅜" from the elbow of the posterior cornu.

Post Operative Care of the Trimmed Ear

After the ears have been sutured, they can be taped tip to tip very loosely over the top of the head. Some veterinarians prefer to leave the ears completely alone for 2–3 days. After 2–3 days, the ears are fixed in the erect position by any one of a number of means. One method that is especially successful is to tape the ears to molded U-shaped splints which have been made of wire and covered with tape. The erect part of the splint should be slightly longer than the ear. The ear is taped loosely so that it literally hangs in the splint. The ear is left in the splint for 8–10 days.

Summary

If any practitioner is willing to spend the time in perfecting his skill at ear trimming, he will produce living monuments to his medical and surgical skill. By following these few guidelines and using critical observation and evaluation, he should have minimal difficulties in his ear trims.